

## 2.0 Future Supply/Demand & Structure Site Analysis

This section addresses the future parking needs of the community of Old Town. A step-by-step approach was employed to determine the extent of the parking deficiencies in Old Town, and in developing a set of practical alternatives to mitigate them.

An assessment of future parking demand for two planning horizon years (2005 and 2020) is included in this section, along with a parking structure site analysis for Old Town.

### 2.1 Future Parking Supply/Demand Balance

The supply/demand balance was forecast for planning horizon years 2005 and 2020. Based on discussion with the Old Town Community Planner, no upcoming projects were identified which would contribute to any significant parking demand change. Furthermore, all future development projects will be required to provide parking either on-site or through shared parking lease agreement arrangements.

Caltrans will be relocating its District office from the east to west side of Taylor Street within the next five years. As part of the project, Caltrans will provide a surface lot of approximately 815 parking spaces for employees and facility visitors. While there is potential for a joint use arrangement on evenings and weekends, the weekday parking demand would not benefit from this lot. Construction of the new facility across Taylor Street could potentially decrease parking demand adjacent to the existing Caltrans facility. However, since overflow parking in the core area of Old Town and valet parking storage is currently accommodated in the area of the new facility, the current demand from these spaces would likely redistribute to the area surrounding the existing Caltrans facility. As such, the parking demand surrounding the facility may balance out but at this time there is no quantitative measure of the effect of the Caltrans facility relocation. At this time, the future use of the existing Caltrans facility is to be determined.

#### Future Demand Methodology

Since no major land use changes were identified which would affect future parking demand, it was assumed that parking demand in Old Town would increase on a regional scale, as the population in the surrounding region increases. Population estimates published by the San Diego Association of Governments (SANDAG) were used to determine projected growth rates between current and planning horizon years (2005 and 2020). The following population projections and calculated growth rates were used as a basis to factor existing parking demand numbers.

Year	Population (City of San Diego)	Growth Rate (Horizon/Existing Population)
2000	1,289,148	-
2005	1,403,874	9%
2020	1,693,533	31%

Half of the existing parking demand was assumed to be generated by employees of the area; while the remaining half was assumed to be visitor generated. As shown above, the visitor generated portion of the existing demand levels were grown by 9 percent and 31 percent to estimate parking demand figures for the years 2005 and 2020. The employee portion of the parking demand is assumed to remain constant.

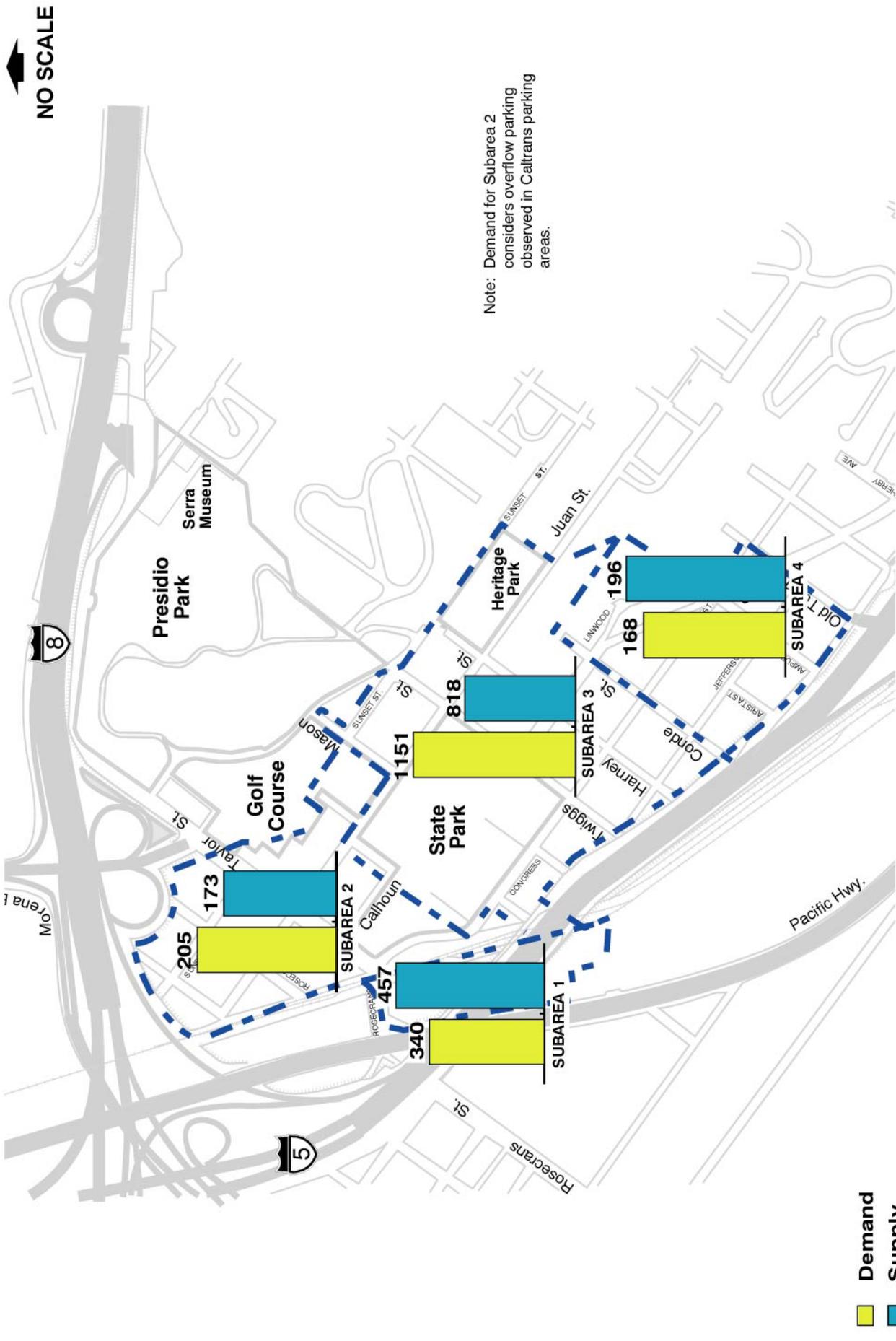
Based on the analysis of existing conditions, a parking deficiency already exists in Old Town. The existing demand analysis demonstrates that Sub Area 3 has the greatest need for additional parking facilities. By examining the parking demand for years 2005 and 2020 and determining which Sub Areas exhibit the greatest need for additional parking spaces, a parking facilities siting process can focus on these particular areas.

### Year 2005 Parking Demand

Table 2.1 presents the projected year 2005 parking demand versus existing supply for the Sub Areas within the community of Old Town. The average demand presented is the highest daily average expected for the on- or off-peak season, weekday or weekend for each Sub Area. The peak demand presented is the highest individual hour expected for the on- or off-peak season, weekday or weekend for each Sub Area. Figures 2.1 and 2.2 present the projected year 2005 average and peak parking demand, respectively, by Sub Area.

Similar to existing conditions, Sub Area 3 exhibits the greatest need for additional parking spaces in 2005, with a peak deficiency of 355 spaces. Sub Area 2 also shows a slight deficiency. However, a portion of the demand shown in Sub Area 2 is likely generated in the State Park portion of Sub Area 3. Sub Area 1 is shown to need additional spaces under peak conditions. However, over the course of a day, Sub Area 1 does not demonstrate a consistently high parking deficiency since the average demand value is accommodated by the available parking supply.

<b>Sub Area</b>	<b>Parking Supply</b>	<b>Average Demand</b>	<b>Average Deficiency (Surplus)</b>	<b>Peak Demand</b>	<b>Peak Deficiency (Surplus)</b>
<b>1 Trolley Stop</b>	457	340	(117)	527	70
<b>2 Taylor Street/Caltrans</b>	173	205	32	209	36
<b>3 State Park Historic District</b>	818	1,151	333	1,173	355
<b>4 Old Town Ave./School/San Diego Ave.</b>	196	168	(28)	188	(8)



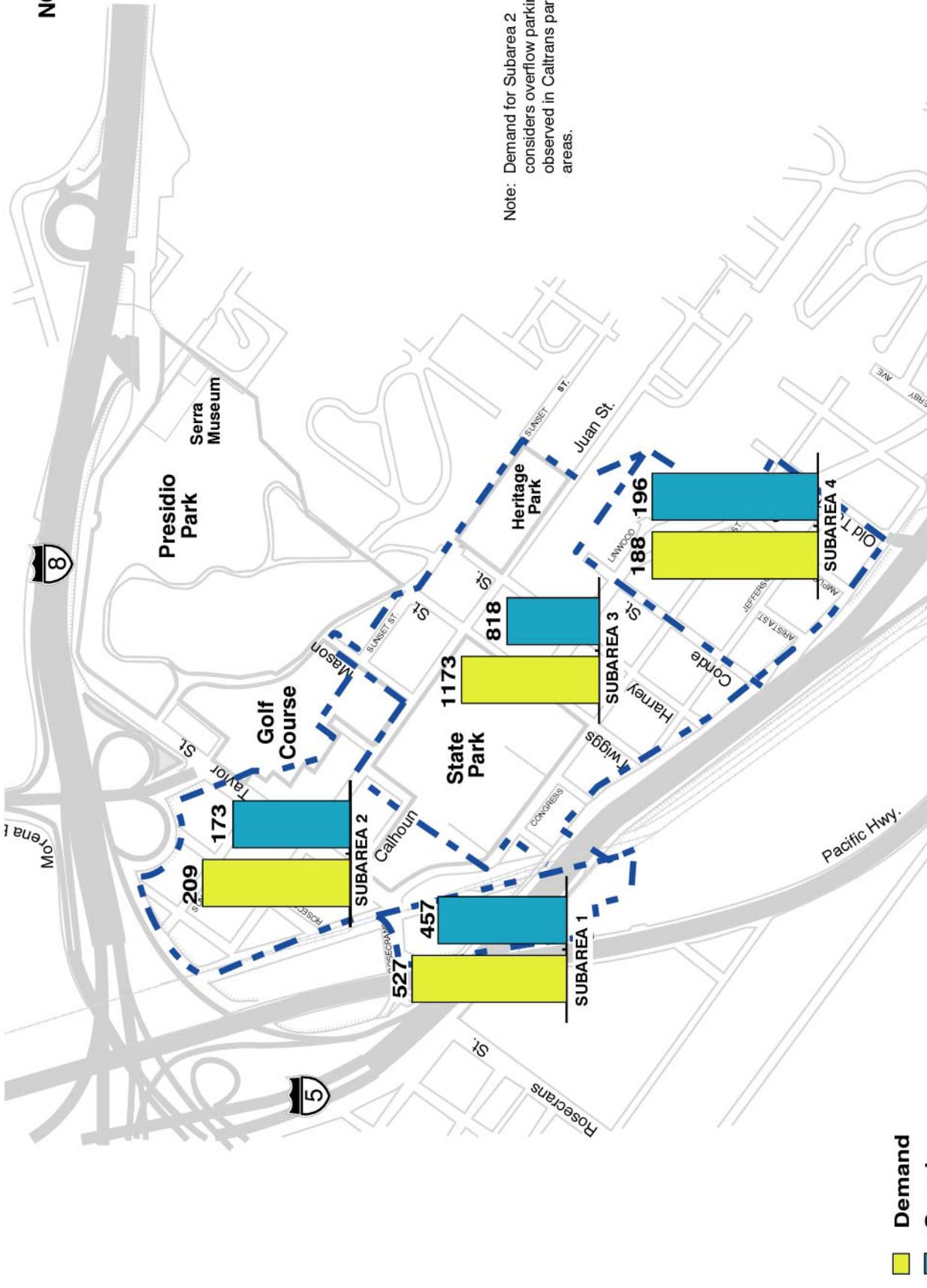
Note: Demand for Subarea 2 considers overflow parking observed in Caltrans parking areas.

NO SCALE

**Old Town On and Off Street Parking  
2005 Demand For Average Occupancy  
City of San Diego Visitor Oriented Parking Survey**

**Figure 2.1**

NO SCALE



Note: Demand for Subarea 2 considers overflow parking observed in Caltrans parking areas.

**Old Town On and Off Street Parking  
2005 Demand For Peak Hour Occupancy  
City of San Diego Visitor Oriented Parking Survey**

Figure 2.2

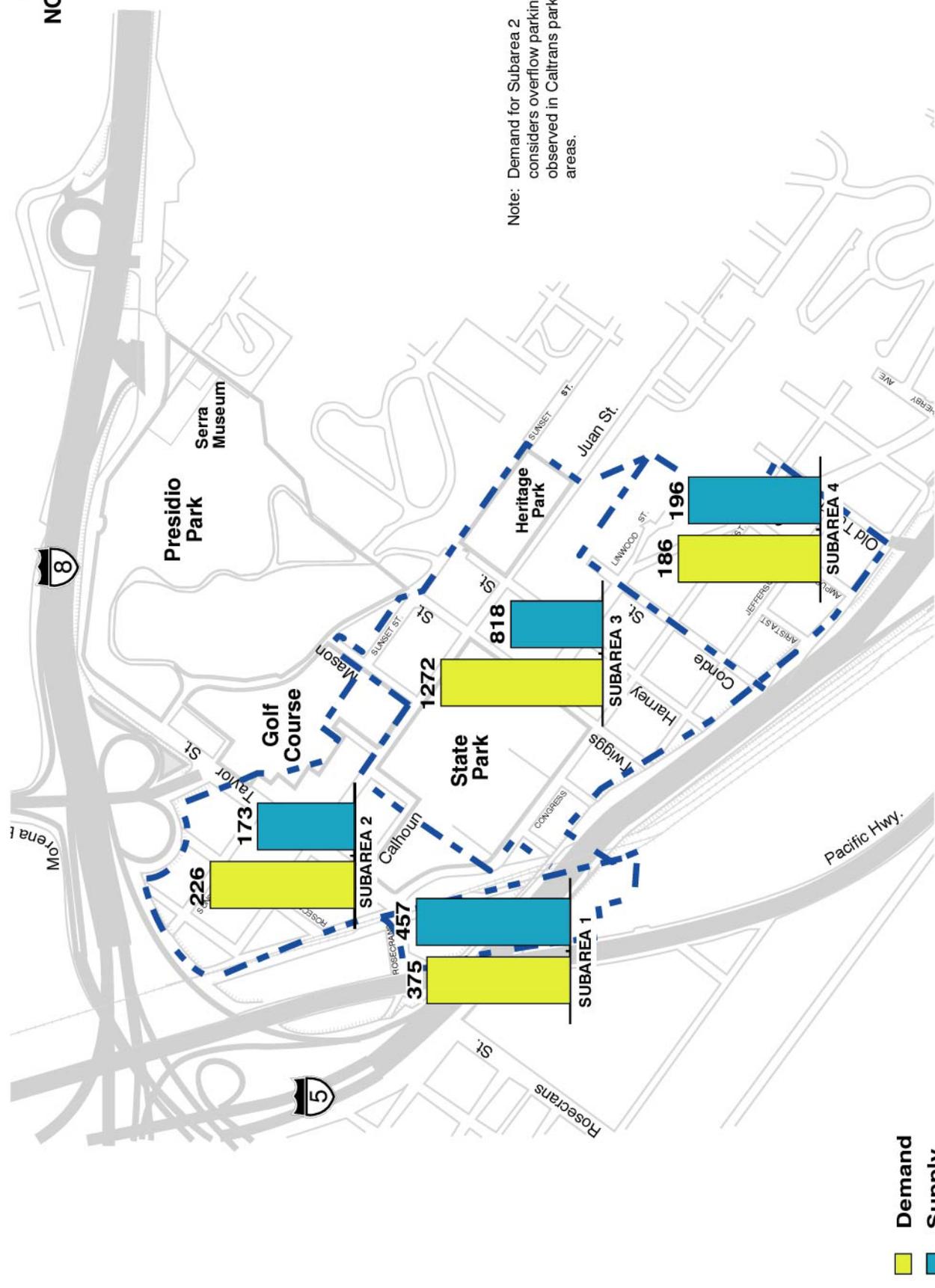
## Year 2020 Parking Demand

Table 2.2 presents the projected year 2020 parking demand versus existing supply for the Sub Areas within the community of Old Town. The average demand presented is the highest daily average expected for the on- or off-peak season, weekday or weekend for each Sub Area. The peak demand presented is the highest individual hour expected for the on- or off-peak season, weekday or weekend for each Sub Area. Figures 2.3 and 2.4 present the projected year 2020 average and peak parking demand, respectively, by Sub Area.

Sub Area 3 continues to exhibit the greatest need for additional parking spaces in 2020, with a peak deficiency of 454 spaces. Sub Area 2 also shows a deficiency. However, a portion of the demand shown in Sub Area 2 is likely generated in the State Park portion of Sub Area 3. Sub Area 1 is shown to need additional spaces under peak conditions. However, over the course of a day, Sub Area 1 does not demonstrate a consistently high parking deficiency since the average demand value is accommodated by the available parking supply.

<b>Sub Area</b>	<b>Parking Supply</b>	<b>Average Demand</b>	<b>Average Deficiency (Surplus)</b>	<b>Peak Demand</b>	<b>Peak Deficiency (Surplus)</b>
<b>1 Trolley Stop</b>	457	375	(82)	582	125
<b>2 Taylor Street/Caltrans</b>	173	226	53	231	58
<b>3 State Park Historic District</b>	818	1,272	454	1,297	479
<b>3 Old Town Ave./ School/San Diego Ave.</b>	196	186	(10)	208	12

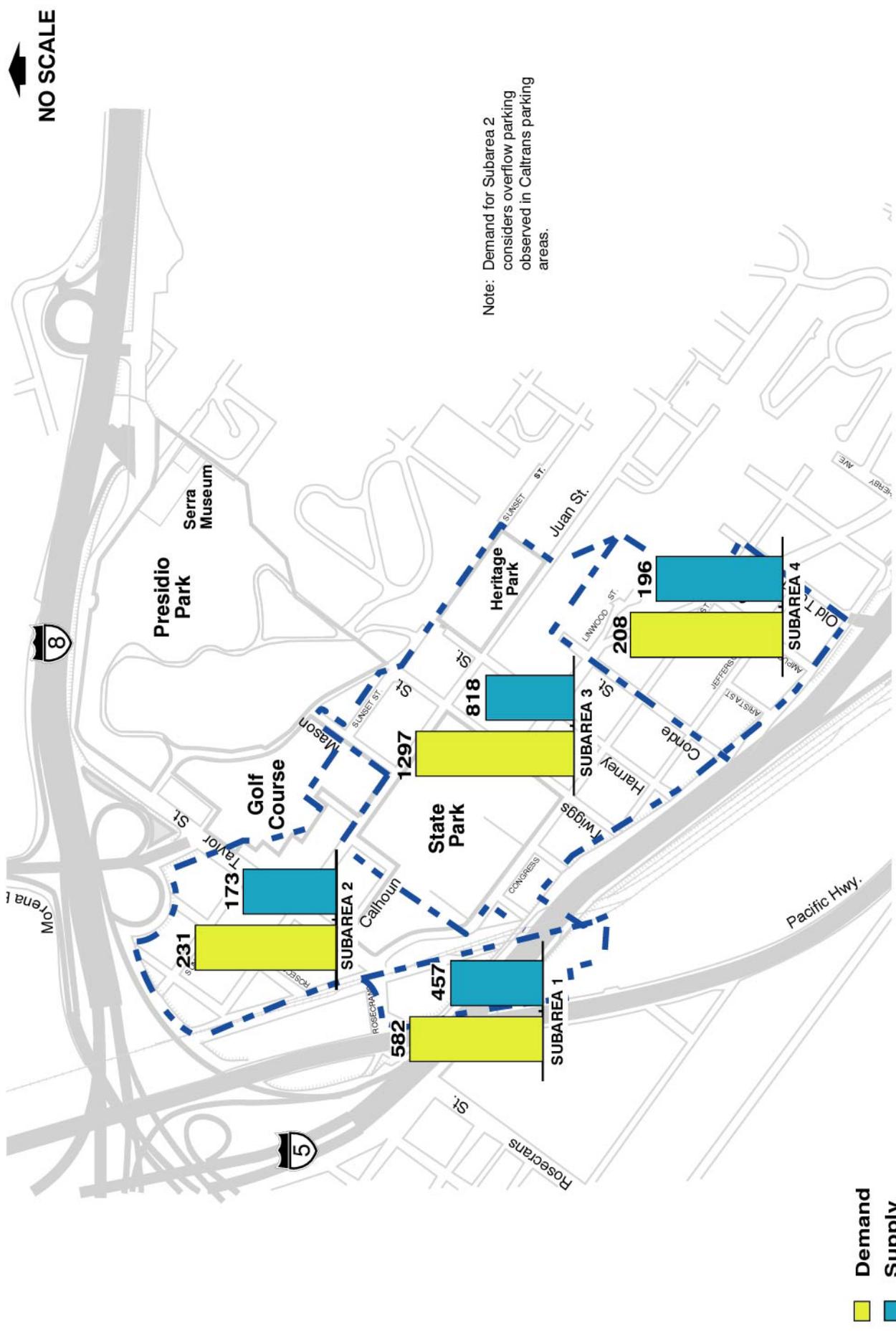
NO SCALE



Note: Demand for Subarea 2 considers overflow parking observed in Caltrans parking areas.

**Old Town On and Off Street Parking  
2020 Demand For Average Occupancy**  
City of San Diego Visitor Oriented Parking Survey

Figure 2.3



Note: Demand for Subarea 2 considers overflow parking observed in Caltrans parking areas.

NO SCALE

**Old Town On and Off Street Parking  
2020 Demand For Peak Hour Occupancy  
City of San Diego Visitor Oriented Parking Survey**

**Figure 2.4**

## 2.2 Parking Structure Site Analysis

Both the parking utilization studies and the parking demand analysis provided considerable information regarding parking conditions in Old Town. This section discusses possible parking solutions to help mitigate the disparity between parking supply and parking demand.

In determining sites for parking, parameters were used that allowed an objective evaluation of sites. A well-located and designed parking facility will score high in four areas of evaluation:

- **Consumer friendly.** Parking needs to accommodate patrons in a logical and easy-to-understand manner. It needs to be close to primary destinations, easy to get to, and easy for patrons to navigate and park within.
- **Good neighbor.** A parking facility needs to fit well with the surrounding environment. The facility should complement existing land uses and not detract from other neighborhood uses. It should be compatible with the existing city infrastructure, and have a minimal adverse impact on local traffic conditions.
- **Operationally efficient.** A good site will have dimensions that allow a facility to be built with good parking efficiency, that is, minimal space taken up by aisles and other non-parking areas. Ingress and egress will be logical and efficient. Net gain in parking spaces relative to cost is also important.
- **Ease of implementation.** A site that has multiple owners, unwilling sellers, etc. is not desirable. Ideally, the site will involve the parking entity or one property owner who is willing to sell will own a site. Good sites have little environmental cleanup and/or other issues that will delay construction.

### Parking Structure Site Reconnaissance

Reconnaissance was performed throughout the Old Town area to identify candidate sites for the placement of a new parking structure. As discussed above, there are numerous parameters that are used for selecting and evaluating potential sites for locating new parking facilities. The following summarizes some of the key factors that were considered in the identification of candidate sites:

- Site shape and size (capacity considerations);
- Existing use;
- Site accessibility for both vehicles and pedestrians;
- Compatibility with adjacent uses;
- Proximity to principal parking generators and areas with identifies parking deficiencies;
- Security and visibility; and
- Environmental considerations including potential noise and visual impacts.

In order to objectively evaluate each of the sites selected for consideration, parking structure concepts were developed. The parking structure concepts represent only a cursory investigation of parking garage solutions. The scope of this study was not to functionally design parking garages, but to determine parking needs and the feasibility of one or more parking structures. Concepts were developed to illustrate one or two reasonable solutions for each site, determine approximate parking capacity for each site, and provide a basis for planning-level cost estimates and financial pro formas. Before any site is developed further, a more detailed study of parking garage solutions needs to be accomplished.

### **Parking Structure Sites:**

- Twiggs and Congress Street (Figure 2.5);
- Harney and Juan Street (Figure 2.6)

These potential structure sites are located in Sub Area 3, which exhibits the greatest parking need under existing conditions and both planning horizon years.

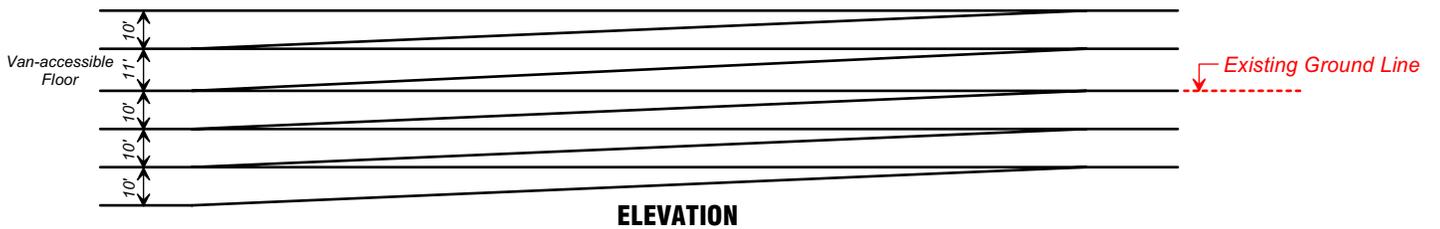
### **Twiggs and Congress Street Site**

This site is rectangular in shape with excellent access from both Twiggs and Congress Streets. It currently accommodates 69 parking spaces.

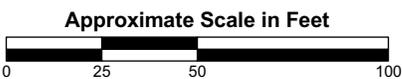
Figure 2.5 is a schematic that shows a typical floor plan and elevation for the site. The proposed concept is a staggered-floor design that includes ramps at each end to provide circulation to each half floor. The total structure has five parking levels (including rooftop parking), 2.5 levels underground and 2.5 levels at or above ground (including surface level). Traffic flow would be two-way providing reasonably easy to understand traffic circulation. The parking structure would only be two stories above grade.

The total size of the structure (all five levels) would be approximately 173,600 square feet. Approximately 540 parking spaces would be provided, which equates to 321 square feet per space. The first floor of the structure would be designed to be van-accessible in accordance with American with Disabilities Act Accessibility Guidelines (ADAAG). Eleven handicap spaces would need to be provided in accordance with ADAAG. Two elevators (required by ADA) adjacent to stairwells would provide pedestrian circulation to each floor.

Construction cost of the facility with reasonable amenities was estimated to be \$40 per square foot for the levels above ground and \$60 per square foot for the levels below ground. Total cost, exclusive of property costs, building relocation costs, architectural and engineering fees, construction engineering and management, and legal and financing costs, would be approximately \$8,700,000, or \$16,100 per space. When considered on a per-net-new-space basis, the cost is approximately \$18,500 per space.



Approximately 540 parking spaces  
(2.5 levels below ground, 2.5 levels at or above ground).



**OLD TOWN  
TWIGGS AND CONGRESS STREET SITE  
PARKING GARAGE CONCEPT  
Figure 2.5**

## Harney and Juan Street Site

This site south of Twiggs Street is irregular in shape and currently accommodates 173 parking spaces. The overall size of the parcel is approximately 75,000 square feet. The proposed concept is a straight-ramp design. The irregular shape of the property results in a higher cost-per-parking space than for the Twiggs and Congress site.

Figure 2.6 shows the concept including a typical floor plan. The concept includes ramps at each end to provide circulation to each half floor. The total structure would have five parking levels (including rooftop parking), three levels underground, one level at grade, and one level above grade. Traffic flow would be two-way providing reasonably easy to understand traffic circulation. Ingress and Egress would be from Harney Street and Juan Street via two access points. The parking structure would only be two stories above grade.

The total structure would be approximately 336,400 square feet, with approximately 875 parking spaces provided in the structure, which equates to 385 square feet per space. Considering the loss of existing parking spaces on the site, the garage would result in a net increase of 702 parking spaces on the site.

The first floor of the structure would be designed to be van-accessible in accordance with American with Disabilities Act Accessibility Guidelines (ADAAG). Eighteen handicap spaces would need to be provided in accordance with ADAAG. Two elevators (required by ADA) adjacent to stairwells would provide pedestrian circulation to each floor.

Like other sites considered, construction of the facility with reasonable amenities was estimated to be \$40 per square foot for the levels above ground and \$60 per square foot for the levels below ground. Total cost, exclusive of property costs, architectural and engineering fees, construction engineering and management, and legal and financing costs, would be approximately \$17,500,000. On a per-space-basis, the cost is approximately \$20,000 per space. When considered on a per-net-new-space basis, the cost is approximately \$25,000 per space.

## 2.3 Conclusions

The analysis of future parking needs in Old Town shows that there is a significant shortage of convenient parking spaces near the State Historic Park, and that the demand is likely to increase along with the growth of the community and tourism in the area. Currently, there is a shortage of 363 parking spaces during the peak demand period. This shortfall will increase to 453 spaces by year 2005, and to 674 spaces by 2020. As parking in Old Town is an essential service provided to visitors to the community, it is vital that solutions to meet these current and predicted deficiencies be found. Table 2.3 provides a summary of the potential site locations in terms of realized parking spaces and structure costs.



Approximately 875 parking spaces  
(three levels below ground, one level at grade, one level above ground).



Approximate Scale in Feet



**OLD TOWN  
HARNEY AND JUAN STREET SITE  
PARKING GARAGE CONCEPT  
Figure 2.6**

<b>Site</b>	<b>Parking Spaces</b>	<b>Net New Parking Spaces</b>	<b>Total Floor Area (sq. ft.)</b>	<b>Total Cost (a)</b>	<b>Floor Area per Space (sq. ft.)</b>	<b>Cost per Space</b>	<b>Cost per Net New Space</b>
<b>Twiggs St. and Congress St.</b>	540	471	173,600	\$8,700,000	321	\$16,100	\$18,500
<b>Harney Ave. and Juan St.</b>	875	702	336,400	\$17,500,000	385	\$20,000	\$25,000

(a) Excluding property costs, building demolition costs, architectural and engineering fees, construction engineering and management, and legal and financing costs.

The concept of the Twiggs and Congress Street site for a parking structure has the advantage of the lowest cost per net new space (\$18,500), due to the rectangular shape of the facility), while the Harney and Juan Street site has the advantage of the most total spaces (875). Both sites are within reasonable walking distance from the State Historic Park.

If additional parking facilities are built to accommodate the projected growth in demand, decisions on the capacity and location must consider not only the current demand patterns and anticipated growth in tourism at Old Town, but also the historic nature and aesthetic integrity of the State Historic Park. A parking structure on the Twiggs and Congress Street Site would have significant environmental constraints relating to the historic nature of the site as well as the use of State Park Lands. Additionally, the community and the State Parks Department have expressed concern about using this site for parking and they would oppose any such action. Therefore, the parking structure at Harney Avenue and Juan Street is the preferred site for development of a parking structure.